

ABSTRACT

A method of communicating within a motion control system includes programming a plurality of drive cards to perform predetermined mathematical and logical functions in response to high-level commands. Each of the drive cards is configured with a respective unique predetermined delay time. Intelligence is distributed throughout the motion control system by electrically interconnecting each of the drive cards with a local area network and to a corresponding component of the motion control system. High-level commands are transmitted to the drive cards across the local area network. The response by each of the drive cards to the high-level commands is delayed according to the unique predetermined delay time. Each of the drive cards respond to the high-level commands following expiration of the unique predetermined delay time. Communication over the local area network is temporarily suspended following response to the high-level commands by the drive cards to thereby ensure deterministic communication over the local area network.